Setting Up a Project Budget

Chapter 11
How much will this project cost me:

$250,000 Hardware
$250,000 Software
$250,000 Services
$250,000 Internal People

I haven’t a clue. There is the perfect world and then there is the real world!
Cost is a resource sacrificed or foregone to achieve a specific objective or something given up in exchange.

Costs are usually measured in monetary units like dollars.
### Where does this project create value?

<table>
<thead>
<tr>
<th>INCOME STATEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sales:</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Total Sales</td>
</tr>
<tr>
<td>$____________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Expenses:</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Goods Sold</td>
</tr>
<tr>
<td>$____________</td>
</tr>
<tr>
<td>Admin Expense</td>
</tr>
<tr>
<td>$____________</td>
</tr>
<tr>
<td>Payroll</td>
</tr>
<tr>
<td>$____________</td>
</tr>
<tr>
<td>Total Expenses</td>
</tr>
<tr>
<td>$____________</td>
</tr>
</tbody>
</table>

### Top Line
Reach new customers, offer new products, cross-sell services, offer complementary products

### Bottom Line
Optimize manufacturing processes, decrease transportation costs, reduce cost of human capital, minimize errors in a process
Question

0 Now that you know all of the activities that make up your project and know that you know how long it will take you to complete these activities, how much is this project going to cost?

0 What kind of things are you going to spend money on?

0 What kind of track record do IT organizations have with IT project cost management?
Exercise

0 How much is it going to cost me to make cookies?

0 Work with the person sitting next to you and give me an estimate

0 Ask any questions that you would like
The Importance of Project Cost Management

- IT projects have a poor track record for meeting budget goals.

- The CHAOS studies found the average cost overrun for unsuccessful IT projects ranged from 180 percent in 1994 to 56 percent in 2004; other studies found overruns to be 33-34 percent.

What is the average cost overrun for successful projects?

0, if they had cost overruns then they aren’t successful projects!
What Went Wrong?

- The U.S. government, especially the Internal Revenue Service (IRS), continues to provide examples of how not to manage costs
  - A series of project failures by the IRS in the 1990s cost taxpayers more than $50 billion a year
  - In 2006, the IRS was in the news for a botched upgrade to its fraud-detection software, costing $318 million in fraudulent refunds that didn’t get caught
  - A 2008 Government Accountability Office (GAO) report stated that more than 400 U.S. government agency IT projects, worth an estimated $25 billion, suffer from poor planning and underperformance

- The United Kingdom’s National Health Service IT modernization program was called the greatest IT disaster in history with an estimated $26 billion overrun
How about internal employees that are hourly vs. exempt? What is the total cost of either?

Can I calculate an hourly rate for an exempt employee? How do I account for overtime?

Do I pay any two employees the exact same?

What about the cost of an employee who is on my project but not working on any tasks today?
Why?

0 What is the difference between capital and expense?

0 Can I convert capital into expense?

0 Can I convert expense into capital?
Basic Principles of Cost Management

What are:

- Tangible costs or benefits vs. Intangible costs or benefits
- Direct costs vs. Indirect costs
- Sunk cost

Tangible costs/benefits - can easily measure in dollars

Intangible costs/benefits - difficult to measure in monetary terms

Direct costs - directly related to producing the products and services of the project

Indirect costs are costs that are not directly related to the products or services of the project, but are indirectly related to performing the project

Sunk cost is money that has been spent in the
past; when deciding what projects to invest in or continue, you should *not* include sunk costs
Learning curve theory states that when many items are produced repetitively, the unit cost of those items decreases in a regular pattern as more units are produced.

Reserves are dollars included in a cost estimate to mitigate cost risk by allowing for future situations that are difficult to predict. Contingency reserves allow for future situations that may be partially planned for (sometimes called known unknowns) and are included in the project cost baseline. Management reserves allow for future situations that are unpredictable (sometimes called unknown unknowns).
What is... return on investment and payback period?

ROI = (total discounted benefits - total discounted costs)

discounted costs
What is “net present value” and why do I care?
Especially important if you are comparing projects which are different...different sizes, different duration

<table>
<thead>
<tr>
<th>Project</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits</td>
<td>$0</td>
<td>$2,000</td>
<td>$3,000</td>
<td>$4,000</td>
<td>$5,000</td>
<td>$14,000</td>
</tr>
<tr>
<td>Costs</td>
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<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$1,000</td>
<td>$9,000</td>
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<tr>
<td>Cash flow</td>
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<td>$3,000</td>
<td>$4,000</td>
<td>$5,000</td>
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<tr>
<td>NPV</td>
<td>$2,316</td>
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</tbody>
</table>

**Formula =npv(b1:b6:f6)**

<table>
<thead>
<tr>
<th>Project</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benefits</td>
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<td>$4,000</td>
<td>$4,000</td>
<td>$4,000</td>
<td>$15,000</td>
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<tr>
<td>Costs</td>
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<td>$2,000</td>
<td>$2,000</td>
<td>$2,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Cash flow</td>
<td>($1,000)</td>
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<td>$2,000</td>
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<tr>
<td>NPV</td>
<td>$3,201</td>
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<td></td>
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</tr>
</tbody>
</table>

**Formula =npv(b1:b13:f13)**

Note that totals are equal, but NPVs are not because of the time value of money.
You’re looking at your planned costs and you are at $2.5 million. Your sponsor has given you a budget of $2 million.

Where do you start to address this gap?

1. Check for errors:
   1. Task Duration
   2. Cost per use
   3. Resource rates
   4. Planned assignment costs
   5. Cost resource amounts
   6. Fixed costs for tasks

2. Adjust the schedule
   1. Shorten task durations
   2. Don’t pay to fast-track
   3. Check for bogus date constraints

3. Adjust assignments
   1. Replace expensive resources with cheaper
resources
2.  Do away with overtime
3.
What do you do when you’re just trying to 10 pounds of stuff in a 5 pound bag?

1. Speak with your sponsor and get a bigger budget. Usually clear with steering team after getting sponsor’s support.
2. Cut back on project scope.
3. Don’t do what the book tells you – cutting back on quality! It will haunt you for the life of the system. I’d rather be late or over budget.
What is “procurement”? 

Means of acquiring goods and/or services from an outside source.
When I outsource, I purchase services instead of providing these services using internal resources. I can outsource nothing...I can outsource everything...what makes the most sense for my company?

To reduce both fixed and recurrent costs

To allow the client organization to focus on its core business

To access skills and technologies
To provide flexibility

To increase accountability
A **contract** is a mutually binding agreement that obligates the seller to provide the specified products or services and obligates the buyer to pay for them. Contracts can clarify responsibilities and sharpen focus on key deliverables of a project.

Because contracts are legally binding, there is more accountability for delivering the work as stated in the contract.

An **SLA** is a metric that can be used to measure...
compliance with terms of contract

Some organizations have SLAs between IT and the business units, essentially a contract between IT and the business
What is better, to build your own IT solutions or to buy them off the shelf?
Assume you can lease an item you need for a project for $800/day; to purchase the item, the cost is $12,000 plus a daily operational cost of $400/day.

How long will it take for the purchase cost to be the same as the lease cost?

Set up an equation so both options, purchase and lease, are equal.

In this example, use the following equation; let \( d \) be the number of days to use the item:

\[
12,000 + 400d = 800d
\]

Subtracting $400d from both sides, you get:

\[
12,000 = 400d
\]

Dividing both sides by $400, you get:

\[
d = 30
\]

If you need the item for more than 30 days, it is more economical to purchase it.

Purely an unemotional, financial decision. First decide buy-vs-build. If “buy”, then decide purchase-vs-buy.
Who assumes more risk, the customer or the vendor, when working with fixed price contracts or time and materials/hourly contracts?
What is a “statement of work (SOW)”? 

A statement of work is a description of the work required for the procurement.

If a SOW is used as part of a contract to describe only the work required for that particular contract, it is called a contract statement of work.

A SOW is a type of scope statement.
A good SOW gives bidders a better understanding of the buyer’s expectations
What is an RFP?

What is an RFQ?

Request for Proposals: used to solicit proposals from prospective sellers
    A proposal is a document prepared by a seller when there are different approaches for meeting buyer needs

Requests for Quotes: used to solicit quotes or bids from prospective suppliers
    A bid, also called a tender or quote (short for quotation), is a document prepared by sellers providing pricing for standard items that have been clearly defined by the buyer